City of Cambridge
Open Space and Recreation Plan
2003 – 2008

Approved July, 2005 by the Massachusetts Department of Conservation Services

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SECTION 1 PLAN SUMMARY

The residents, elected leaders, and staff of the City of Cambridge attempt to maintain a perspective on the past in an effort to plan effectively for the future. This document, the 2003 Cambridge Open Space and Recreation Plan, upholds this tradition. The early sections of the plan describe the city's current status as a dense, urbanized, employment and population center within the Boston metropolitan core. The historical processes that led to this current situation, as well as some of the details of its current population characteristics and development patterns are given. Land, water, and wildlife resources are inventoried.

This body of information is presented to offer readers a perspective on how the open space and recreation needs, goals, objectives, and planned actions of later sections were determined. These later sections include ideas for how to best plan for acquisition, management, natural resources conservation, and neighborhood-level improvements.

SECTION 2 INTRODUCTION

A. Statement of Purpose

Since developing its 1994 Open Space and Recreation Plan, Cambridge has invested a great deal of effort in enhancing the local environment. Efforts have focused on a wide-variety of environmental issues related to quality of life within an urban context. Environmentalism is not viewed as a distinct category of work, but is a consideration in many public improvement projects. Such integrated projects have included the development of a guiding Climate Protection Plan, the creation of a shuttle though public private partnerships connecting workers to transit, and the ongoing “green” rehabilitation of a municipal building.

In addition to such integrated environmental projects, the City has maintained a commitment to quality and equitable access to public land. Investment in the city's 77 parks and open spaces has continued at a high level, with projects involving greater community input, collaboration between departments, and innovative design. The City is currently in the process of redeveloping the 238 Broadway parcel into a park in a neighborhood identified as underserved by open space, and continues to look for new opportunities to add to its park inventory whenever possible.

The purpose of the 2003 Cambridge Open Space and Recreation Plan is to provide a framework that supports this ongoing work. More specifically, this plan serves to:

1) Update the 1994 Cambridge Open Space and Recreation Plan, highlighting major changes within the City;
2) Evaluate major planning initiatives in terms of their potential influence on the development of open space;
3) Review historical factors that influence contemporary planning;
4) Incorporate the City’s recently developed Geographic Information Systems (GIS) technologies into the open space planning process;
5) Provide a common point of reference for the various City departments involved in the development of the City’s natural areas and parks;
6) Provide Cambridge residents with a single source of information they can consult to learn

about major issues related to open space and recreation.

B. Planning Process and Public Participation

The 2003 Cambridge Open Space and Recreation Plan is an attempt to synthesize many planning processes into a single document. During the nine years since it implemented the 1994 Cambridge Open Space and Recreation Plan, the City has sponsored numerous initiatives related to this topic, ranging from citywide processes to neighborhood studies to the redevelopment of specific sites. Section 6A of this document (Description of Process) describes some of the more noteworthy planning processes in detail.

All of these activities have involved a public participation component. The manner in which the public participated varied by process; at times, an appointed citizen committee was most appropriate, at others, one or more public meetings were utilized. In the case of the 2002 Open Space and Recreation Telephone Survey, an alternate technique was used to reach a broader base of residents than might attend public meetings. Therefore, while a public meeting was not held about this plan specifically, the information gathered from previous processes brings with it a strong element of community input.

This document was researched and prepared by staff within the Community Planning Division of the Community Development Department, using the 1994 plan as a framework. However, the many processes that inform this project were undertaken by a variety of City departments, including all of the divisions within the Community Development Department, the Human Services Department of Recreation, the Department of Public Works, the Water Department, and the City Manager's Office. The Cambridge City Council has also played an important role by supporting these endeavors.

SECTION 3 COMMUNITY SETTING

A. Regional Context

The City of Cambridge is located in Middlesex County in the Charles River Watershed (with that river forming its eastern border). Cambridge's neighbors include Boston on the south and east, Watertown and Belmont on the west, Arlington on the north and Somerville on the north and east.

The thirteen neighborhoods that make up Cambridge vary greatly in character, and include former industrial areas evolving into high-tech employment centers, multi-family residential neighborhoods, lively mixed-use squares, and the large natural area surrounding Fresh Pond. However, the overall feel of the city is that of a densely-populated, urbanized, inner-ring suburb.

The city has long served as a center of regional employment, first during the industrial age and more recently in the post-industrial, information-based economy. A variety of factors, including proximity to Boston, excellent transportation infrastructure, and well-known academic institutions have made Cambridge an attractive location to employers. This status as part of the inner-metropolitan center creates the challenge of providing high-quality services for residents and for others who come to the city to work, attend school, or visit.

Cambridge is not only linked to its neighbors in the region by the human-made institutions of transportation infrastructure, commerce, and education, but also by the natural green infrastructure that often goes unnoticed in an urban area. Perhaps the most significant part of

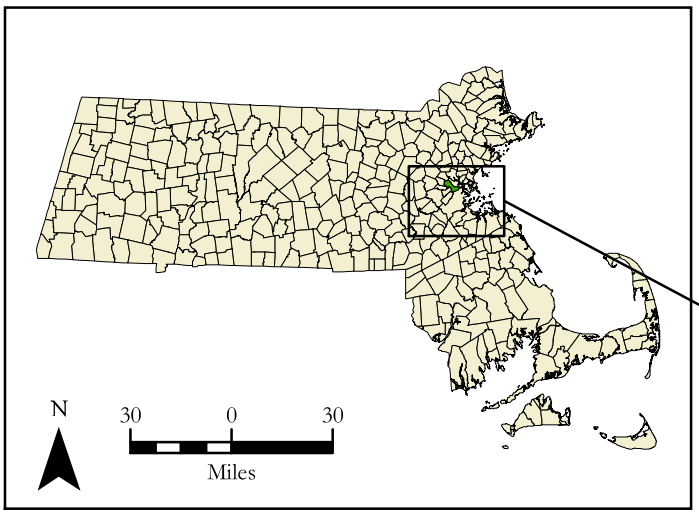
this green infrastructure is the Charles River, which makes its final stop in Cambridge and Boston before flowing into the ocean. While great strides have been made in improving water quality over the past several decades, at present the river is only suitable for boating, not swimming or fishing.

It is not only the towns along the Charles River itself, but also those within its larger aquifer that are linked by this shared resource. While many of the industrial and agricultural threats to river quality faced in the past have diminished, new patterns of development within the thirty-five communities of the aquifer create new threats to water quality. Thus, the lives of residents within the city stand to be impacted by development outside its borders. Likewise, in the northwest section of Cambridge, Alewife Reservation is threatened by activity in the larger Mystic Watershed.

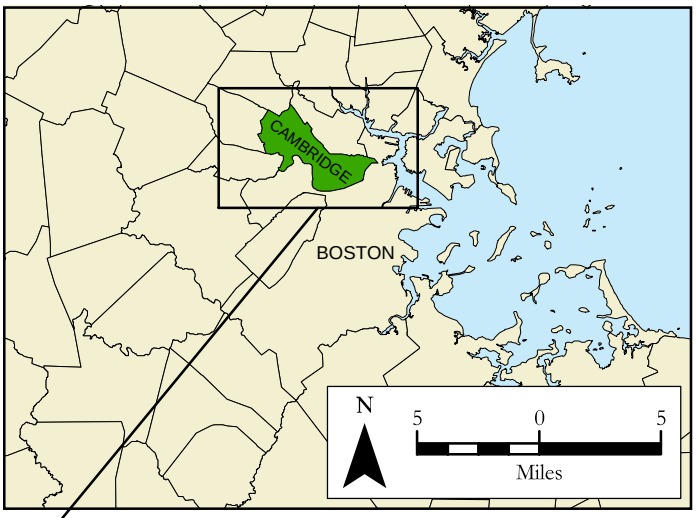
Location Maps

Cambridge, Massachusetts

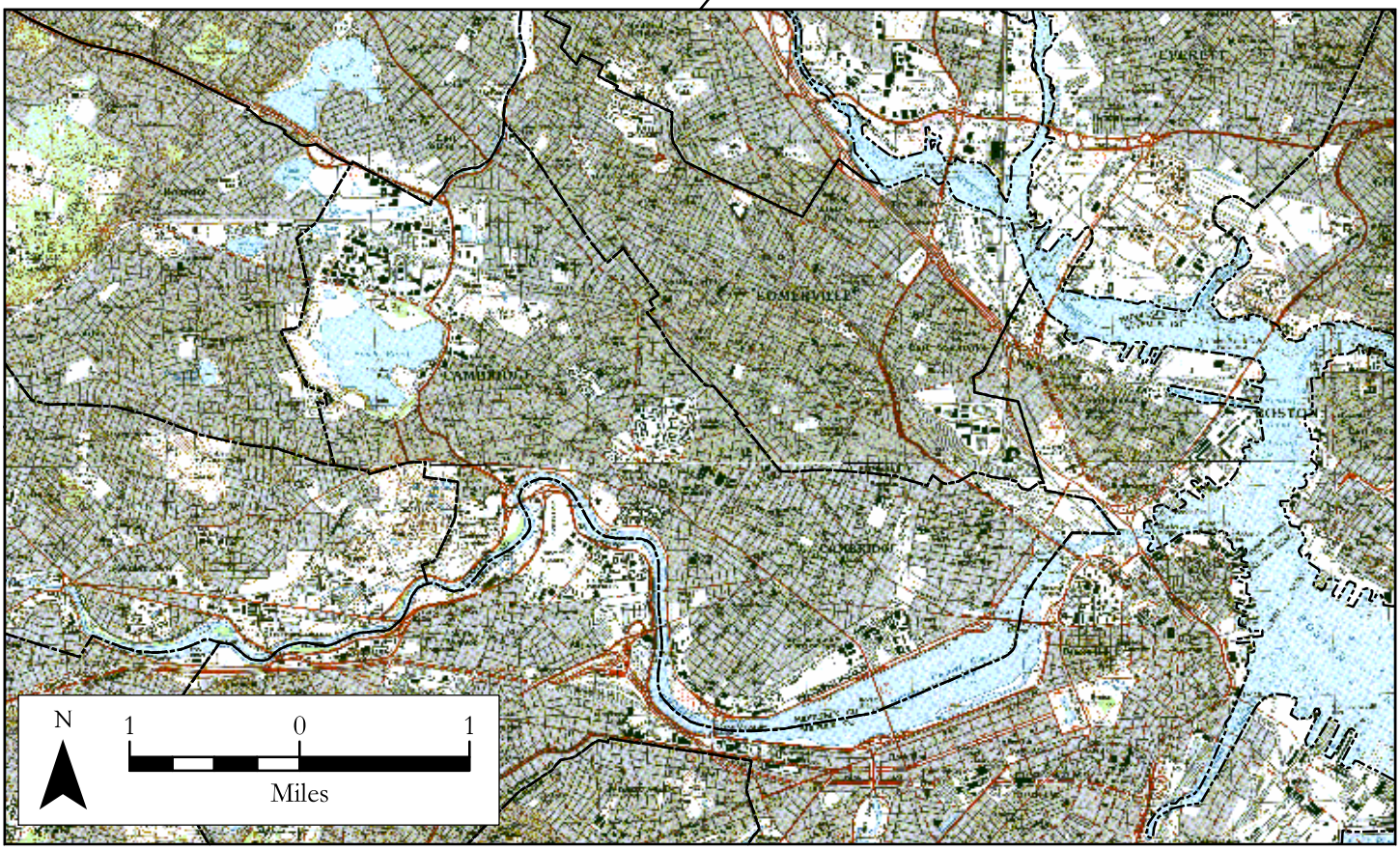
Massachusetts



Boston Area



Cambridge



Source: USGS Topographic Quadrangle Maps from MassGIS.

Open Space Plan

Community Development Department
Cambridge, Massachusetts

Map prepared August 4, 2003. CDD GIS d:\projects\openspace\open_space_plan\os_plan_locus.mxd

B. History of the Community

Prior to European settlement, the land that is now Cambridge was an important focal point for Native American activities, especially during the summer when it became a staging area for food gathering. The only surviving features from that time are several trails that have since become major transportation and commercial corridors throughout the city. One such trail, is today Massachusetts Avenue, from Harvard Square to Alewife Brook.

The first European settlement occurred in 1631 when the English came to what is now Harvard Square, and which was then the confluence of several major native trails. The new settlement, called Newtowne, was the capital of the Massachusetts Bay Colony.

The village at Harvard Square quickly established itself as the focal point for all economic, religious and civic activities in the new town. Settlers were not allowed to live outside the village, resulting in a small, nucleated settlement with house lots in town and fields beyond the village. In 1636 Newtowne lost its civic pre-eminence when the capital of the Massachusetts Bay Colony was relocated to Boston, now a town of substantial size. However, the village became the educational center of the colony when Harvard College was established there during the same year. The college located itself just to the north of the house lots. In honor of this new institution of higher learning, the village renamed itself Cambridge, after the esteemed college in England. The original street grid of the 1630's village and yard of Harvard College remain today.

Throughout the 17th and 18th centuries, the town's focus remained at Harvard Square. Drawn by the cache of Harvard College and the idyllic quaintness of village life, Boston's elite built summer houses along Brattle Street to the west of the Square. Elsewhere were scattered farms and an occasional tavern along a main road.

Not until the late 18th century did the focus of the town's activities began to shift outward from Harvard Square. The construction of the West Boston (Longfellow) Bridge in 1793 opened the town up to Boston real estate developers and manufacturing concerns. As a result, the beginnings of new villages in East Cambridge, Central Square and Cambridgeport emerged during the early years of the 19th century. Most notably, the developers of East Cambridge persuaded the Middlesex County government to move from Harvard Square to East Cambridge with the promise of a new courthouse. The county seat remains in East Cambridge today.

It was in these early years of the 19th century that Cambridge's enormous industrial history took root. Glassmaking established itself in East Cambridge, along with soapmaking and candlemaking; ropemaking and tanneries moved into Cambridgeport. Pipe organs were also manufactured in Cambridge.

Industrial growth climbed slowly during the first two decades of the century, as a consequence of the War of 1812. Then, in 1820, the economy took off. Soapmaking and candlemaking continued as the leading industries, followed by brickmaking in North and West Cambridge (Alewife) and glassmaking. Added to these was carriage manufacturing, including omnibus and modern railway carriages, supported by numerous lumberyards. Food processing and furniture industries were given their start during these years as expanding railroad facilities gave them access to regional and national markets. By mid-century, heavy industry, including boilermakers, engines, iron works, heavy machinery, presses and metal stamping took hold in Cambridge, boosted in part by the Civil War. Industry expanded from its small beginnings in

East Cambridge, Cambridgeport and Alewife to Kendall Square, lower Cambridgeport, parts of Riverside and North Cambridge. During the latter part of the 19th century refined sugar, candy, caskets, twine and netting, hosing, reinforced concrete, petroleum products and bitulithic pavement were added to the already long list of products manufactured in Cambridge.

Population growth closely followed the industrial boom. Between 1820 and 1830, the number of people living in Cambridge doubled. Between 1830 and 1870, population increased six-fold. Added to the Yankee stock were growing numbers of Irish, Polish, Italians, Portuguese and French-Canadians along with other ethnic and national groups. By 1865, 20 percent of the population was Irish-born with the total immigrant population making up about 28 percent of the city. Cambridge became a city in 1846, underscoring the dramatic demographic and industrial changes taking place at during the first half of the 19th century.

Residential growth raced to keep up with the burgeoning population. While Harvard Square retained its status as a quiet home for the intellectual and economic elite, dense new residential development for workers took place near the factories in East Cambridge and Cambridgeport, and near the brick yards in North Cambridge and west Cambridge. Little thought was given to open space. The Cambridge landscape was dramatically altered between (roughly) the 1850s and the 1930s as tidal marshes along the Charles, and freshwater marshes at Fresh Pond and Alewife, were filled. Filling at Alewife coincided with the industrial/commercial development of the area. Central Square, now on the street railroad line from Boston, began to take over as the commercial center of Cambridge, and eventually became the civic center when City Hall was built there in 1890. A comfortable middle class suburb developed north of Massachusetts Avenue between Central and Harvard Squares, and a more affluent suburb grew north of Harvard Square on Avon Hill.

This forward momentum of industrial, demographic and residential growth continued almost unabated into the 20th century. World War I gave a substantial boost to Cambridge's already robust industrial base. Added to this frenzy of these early decades was the relocation of the Massachusetts Institute of Technology to the Cambridgeport riverfront in 1916. In addition to establishing a second educational anchor to the city, MIT brought electronic, engineering, scientific instrument and industrial research firms to Cambridge.

Soon after the turn of the century, the population passed the 100,000 mark, reaching 104,839 by 1910. After 1910, however, the influx of new immigrants slowed due to the war in Europe. The situation changed at the end of the war when immigration picked up again. By 1915, the population of Cambridge reached almost 109,000 people, and by 1925, the population was 119,669, only 1,071 below the all time high of 120,740 in 1950.

The influx of residents during these first decades prompted more residential development to the point that the city became a series of interlocking street grids from east to west, leaving virtually no undeveloped land remaining, and no great expanses of open space. Today, the city's neighborhoods take their architectural character from the pre-1930 Cambridge. The extension of the subway to Harvard Square in 1912 and trolley lines up Massachusetts Avenue resulted in the construction of more apartment buildings along Massachusetts Avenue giving the city a more urban flair. The subway extension also allowed Harvard Square to regain some of its former stature as a commercial center, although Central Square was clearly thought of as "downtown".

Industrial growth in Cambridge peaked in 1929. The Great Depression took the edge off of industrial development in the city, as it did elsewhere in the country. In 1929, the value of

goods produced was $175 million. By 1933, this value reached only $97 million. The value of goods produced recovered somewhat by 1940, reaching $129 million. World War II provided additional impetus for industrial growth, especially for heavy industry producing durable goods. The war also expanded the research role of the universities, particularly defense-related work at MIT. Subsequent advances in electronics and communications, including the development of radar, shaped the high technology industries of the next half-century.

The forward momentum of the economy was carried into the post war years. The chemical industry expanded, and the founding of Polaroid in Cambridge made the city notable in the field of photographic equipment. This recovery, however, was short lived, peaking in 1950. The 1950's brought about a sharp decline in the value, quantity and diversity of goods produced, as Cambridge fell victim to industrial competition from the suburbs, the South and foreign countries. One by one, both large and small manufacturers closed their doors forever, and the firms that remained employed fewer and fewer workers.

Population figures during the second quarter of the century reflected the highs and lows of the economy. In 1930, the population reached 113,643 people; however, by 1940, the number had dropped to 110,879. It rose again in 1950 to peak at 120,740 people, the largest number of people ever to live in the city. Paralleling industry, the first major out-migration of people occurred in the early 1950s as working and middle class families left the inner city for the suburbs. The family population expanded slightly in the late '50s, following the Korean War, but the overall population figure continued to drop.

In addition to changes in the sizes of the population at mid-century, the ethnic and racial composition of the city shifted as well. Industrial growth, particularly defense production, brought waves of black job seekers from the South. Portuguese-speaking people from the Azores, Cape Verde and occasionally Brazil continued to migrate to the eastern part of the city, joining extended family networks already in place. In contrast, many of those migrating out to the suburbs were of northern European descent, especially Irish.

In 1960, to counteract the loss of residents and businesses -- and the erosion of the tax base -- the city revised the zoning ordinance to permit higher densities and heights in both commercial and residential districts as a lure for drawing people back into Cambridge. In much the same philosophical vein, during the 1960s, much of Kendall Square was razed as part of the federal urban renewal program. Other industrial buildings across the city fell before the wrecker's ball or housed marginal uses; however, as firms moved away, the remaining industrial buildings were under utilized, contributing more and more to what was considered to be urban blight. A further blow to the city was the state's proposal to construct a six-lane expressway (the Innerbelt) cutting across the heart of the city, from Cambridgeport, through Central Square, across Neighborhood IV and Wellington-Harrington to Somerville. The state abandoned this plan in 1972 after much public opposition; however, much of the economic damage had already occurred, especially in Central Square.

Conversely, as the strength of industry diminished, both the physical size and economic prowess of MIT and Harvard University expanded. World War II expanded the research role of the universities, particularly in defense-related work at MIT. Subsequent advances in electronics and communications shaped the high technology industries of the decades following the war. The university research lab, and its technology-based "spinoff" firms, eventually superseded traditional manufacturing as the driving force of the Cambridge economy.

Enrollment at Harvard and MIT grew, fed in part by the demographic pressures of the "baby

boom" of the post-war years and foreign students seeking an American education. Expansion of ancillary and support services at the universities led them to become major employers in the city, and more and more commercial and retail operations, especially in Harvard Square, shifted their emphasis to serve the young student population. Meanwhile, the construction of new suburban shopping malls pulled clientele away from Central Square, adding to the disinvestment in the city's traditional downtown.

With the exception of the major universities, Cambridge continued to suffer from disinvestment and declining growth. In that depressed economic environment, the city began to search for a strategy to revitalize its economy and secure a tax base to ease the burden on homeowners and stem the decline of the city's financial health. These initiatives, which form the foundation for our planning assumptions today, are discussed in the next section, Growth and Development Patterns.

C. Growth and Development Patterns

PATTERNS AND TRENDS

As noted in Section B, Community History, by the mid-1970s, the Kendall Square urban renewal area remained vacant, and the industrial areas of Cambridgeport, Alewife and East Cambridge continued to shed jobs and deteriorate. In response, the city undertook a comprehensive effort to revive these areas, in hopes of attracting federal aid, real estate developers, and, ultimately, employers for which an inner city location would prove desirable. Plans and policy document were produced for the East Cambridge Riverfront, Alewife, and later, Cambridgeport. Each plan recommended a specific mix of new uses, including commercial development and housing integrated into an overall urban design plan of which an integral and defining element was an extensive open space system. It was felt that new development could be contained best in these areas with the least disruption to existing residential neighborhoods. In addition to rebuilding the commercial tax base, these districts also offered the best opportunities to expand residential amenities, such as additional housing and open space, that could not be incorporated into the already densely and fully developed neighborhoods.

Accompanying these new planning initiatives was a change in public sentiment towards the scale of development; the new philosophy gave preference to lower densities, protection of the existing scale and pattern of development, stabilization of the housing stock, and preservation of the historical character and fabric of the neighborhoods and commercial districts. Starting in mid-1970s, both citizen-sponsored and city-sponsored rezoning petitions have nearly reversed, area by area, the increased density and development potential allowed under the landmark zoning revisions adopted in 1960. These rezonings occurred throughout the city, in residential, commercial and industrial areas and included design guidelines in specific areas, including Harvard Square, East Cambridge Riverfront and Alewife.

Additional special permit requirements, which expanded the role of the public in reviewing and shaping private development, were also added to the zoning ordinance during this time. Two of the most significant were provisions for Planned Unit Developments (PUDs) and for more contextually compatible townhouse development.

Another equally important land use evolution during this time was the special authority sought by Cambridge and granted by the legislature in 1979 to control institutional uses in lower density residential neighborhoods. The adoption of the Institutional Use Regulations in 1981

implemented the authorization in 1979.

The planning efforts begun nearly two decades ago began to bear fruit in the 1980s, with reinforcement from a heated real estate market. Development changed the face of once derelict areas, particularly Kendall Square and East Cambridge and, to a lesser extent, Cambridgeport and Alewife. Over eight million square feet were added to the commercial landscape, including offices, research facilities, hotels and light manufacturing. The East Cambridge riverfront, with its system of parks helping to weave the Galleria mall into the urban fabric, is especially successful. While the climate cooled considerably during the early 1990s, and many development projects were stalled due to financial difficulties, the economic boom of the late 1990s and early part of the new millennium saw another round of development in Cambridge. Both resident population and the number jobs in the city increased significantly. Despite the economic downturn that began in 2001, construction and permitting of new projects continues in Cambridge. Employers still find it an attractive place to locate, and its desirability as a place to live has made residential development extremely profitable.

The evolving industrial districts offer the best prospects for new development, including any significant new open space parcels, with the fewest conflicts and compromises. The districts and constituent lots are large by city standards, the use of the land is generally in flux, and it is possible to allow significant flexibility in the character of future development. The space in these districts in not unlimited, however, and meeting diverse demands requires careful planning and urban design framework to guide future physical changes with the maximum public benefit.

In 1991, the Community Development Department began to develop a growth policy to provide a framework for appropriately regulating development. The document that came out of this process, *Toward a Sustainable Future - Cambridge Growth Policy Document*, was approved by the City Council in 1993. It recommends that the city's current mix of urban form, scale, density and mix of uses is worth sustaining and enhancing, both in existing neighborhoods and commercial districts, and in the older industrial districts. Open space is addressed directly in the document; it is recognized as important in its own right and as a vital buffer among conflicting demands on urban land use.

The Growth Policy Document was used as a framework for the significant Citywide Rezoning of 2001. It also led to the more area-specific Eastern Cambridge Rezoning of 2001, and will be an important tool for the Community Development Department as it begins a study to address development in the Alewife area. The Planning Board and the Community Development Department also use this document as a decision-making tool not only in large rezonings but also for smaller, more specific projects.

While East Cambridge, Cambridgeport, and Alewife, continue to provide opportunities for development, perhaps the most significant new development is that proposed for North Point. This 37.1-acre area of the City, with 6.6 acres in Somerville and Boston, previously served as the home of railroad tracks and facilities. As many of these railroads become defunct, and the demand for residential and commercial development remains strong, two major landholders have begun the PUD process required before construction can begin. These two developments alone propose 2300-2700 units of housing. The amount of new residents that will live in North Point will create an entire new neighborhood. This area of the city is well served by transportation infrastructure, and stands to benefit by the creation of approximately 11-acres of open space. However, this level of development will create new challenges in providing